

IN THE CLAIMS:

Please amend the claims as follows:

1-16. (cancelled)

17. (previously presented) A device for treating a particle-laden gaseous medium, having at least one corona-effect electrostatic filter, comprising:

a longitudinal casing;

a longitudinal channel for the gaseous medium, the channel extending in the casing and having two opposite ends adjacent to a gas inlet and outlet of the electrostatic filter, respectively;

an emitting structure extending longitudinally and roughly at the center of the channel; and

a collecting structure extending longitudinally between the channel and the casing and comprising a plurality of cavities forming sites for trapping the particles contained in the gaseous medium, wherein the emitting structure comprises a plurality of serrated plates arranged transversely to the longitudinal direction of the channel.

18. (previously presented) A treatment device according to claim 17, wherein the serrated plates includes stars that are to be connected to a circuit supplying a stabilized high voltage.

19. (previously presented) A treatment device according to claim 17, wherein the collecting structure comprises a separator made from metal wire fabric.

20. (previously presented) A treatment device according to claim 19, wherein the separator is of a cylindrical shape and surrounds the serrated plates of the emitting structure, aligned on the axis of a cylindrical shape of the collecting structure.

21. (previously presented) A treatment device according to claim 17, wherein the emitting structure and the collecting structure are mounted on a supporting structure with which they form a removable filter cartridge of the treatment device.

22. (previously presented) A treatment device according to claim 17, wherein the serrated plates alternate with perforated washers or rings that are arranged transversely to the longitudinal direction of the channel.

23. (currently amended) A treatment device according to claim 17, ~~comprising a~~ wherein the gas inlet and outlet extend ~~extending~~ transversely to the longitudinal channel for the gaseous medium, and ~~these gases,~~ wherein the serrated plates are carried by a rod connected to a circuit that supplies a stabilized high voltage and which is carried, at each of its ends, by an insulator protected by a bell.

24. (previously presented) A treatment device according to claim 23, comprising a second electrostatic filter having metal stars carried by one face of a perforated metal disk connected to the circuit supplying a stabilized high voltage and mounted upstream of a separator of cylindrical shape, made from a metal wire fabric.

25. (previously presented) A treatment device according to claim 17, comprising an oxidation catalyst with monolithic support, upstream of the electrostatic filter.

26. (previously presented) A treatment device according to claim 25, comprising a mechanical filter upstream of the electrostatic filter and of the oxidation catalyst.

27. (previously presented) A treatment device according to claim 26, wherein the mechanical filter comprises a metal mesh filter, defining a forced channel for the gaseous medium entering the treatment device and associated with an electrical resistance that is able to raise the temperature of the gaseous medium.

28. (currently amended) A treatment device according to claim 17, comprising at least one of an inlet for oxidation air upstream of an oxidation

catalyst and an inlet for cleaning air upstream of at least one of the at least one electrostatic filter.

29. (previously presented) A treatment device according to claim 17, comprising aspirating means downstream of the electrostatic filter.

30. (currently amended) A treatment device according to claim ~~27~~ 28, comprising at least one cylindrical casing for housing the electrostatic filter and the oxidation catalyst and/or the mechanical filter.

31. (canceled)

32. (currently amended) A vehicle, comprising: ~~equipped with a treatment device as defined by claim 17~~

an internal combustion engine, and

an exhaust system for exhausting a gaseous medium from the internal combustion engine, said exhaust system including a device for treating the gaseous medium having at least one corona-effect electrostatic filter, said device including

a longitudinal casing;

a longitudinal channel for the gaseous medium, the channel extending in the casing and having two opposite ends adjacent to a gas inlet and outlet of the electrostatic filter, respectively;

an emitting structure extending longitudinally and roughly at the center of the channel; and

a collecting structure extending longitudinally between the channel and the casing and comprising a plurality of cavities forming sites for trapping the particles contained in the gaseous medium, wherein the emitting structure comprises a plurality of serrated plates arranged transversely to the longitudinal direction of the channel.

33. (previously presented) Process for treatment of a particle-laden gaseous medium, the process comprising the following acts:

generating turbulences in the gaseous stream,

modifying the electrical state by ionization of particles present in the gaseous medium, during and/or before the particles are subjected to said turbulences,

deflecting the charged particles towards a collection zone by polarizing the collection zone with respect to the charged particles, and

trapping the particles deflected towards the collection zone in a plurality of cavities.

34. (previously presented) The process according to claim 33, wherein the act of polarizing the collection zone includes earthing the collection zone.

35. (previously presented) A treatment device according to claim 17,
further comprising a finishing filter.

36. (previously presented) A treatment device according to claim 18,
further comprising a finishing filter.